

Minnesota Department of Public Safety State Fire Marshal Division

Smoke Alarms

Purpose

Provide information on smoke alarm requirements in residential occupancies based on when the building was constructed and if the building had any existing smoke alarms.

Acronyms

- Minnesota Residential Code (MRC).
- Minnesota State Fire Code (MSFC).

Residential occupancies defined

- Single family home, two-family home, townhouses (MRC buildings).
- Apartment/condominium buildings (MSFC Group R-2 buildings).
- Hotels, motels, bed and breakfast (MSFC Group R-1 buildings).
- Housing with services, assisted living, other care facilities (MSFC Group I-1 buildings).
- Board and care, family day cares (MSFC Group R-3 or R-4 buildings).

Smoke alarms defined

- Single-station: One smoke alarm powered by a home electrical system and/or battery that sounds an alarm from the device when smoke is detected.
- Multiple-station: Two or more single station smoke alarms powered by a home electrical system and batteries that are interconnected and sound an alarm from all devices when smoke is detected in anyone of the devices
- Multiple-station wireless: Two or more single station smoke alarms powered by a home electrical system or batteries that are interconnected wirelessly and when a device detects smoke all devices sound an alarm via a wireless network created by the devices.

Required maintenance for smoke alarms

- Smoke alarms shall be tested once a month using the testing method recommended by the manufacturer. Typically this is accomplished by pushing the test button on the alarm.
- Replace batteries annually (or when alarm chirps, warning batteries are nearing the end of their life) unless the smoke alarm uses long-life batteries. Long-life smoke alarms with batteries sealed inside shall be replaced immediately when alarm chirps warning batteries are nearing end of life.



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Replacement of smoke alarms

- Smoke alarms are required by the fire code to be replaced when they exceed 10 years from the date of manufacture. The date is located on the back of the alarm. If there is no date the smoke alarm is over 10 years old.
- Replace when the smoke alarm fails an operability test.
- Smoke alarms shall be replaced with the same type of power supply. This does not prevent replacing battery powered alarms with electrically powered alarms with battery backup.

Local municipality's rules

Local municipalities are allowed to adopt ordinances having more restrictive smoke alarm requirements for single family homes. This must be done through a formal ordinance; not through a policy or interpretation. Check with the city code officials to see if more restrictive smoke alarm ordinances are in effect in the community.

Requirements for new construction

- New construction shall comply with MSFC Section 907.2.11.
- New homes constructed to the MRC shall comply with Section R314.

CONDITION	LOCATION	POWER SUPPLY	INTERCONNECTION REQUIRED
New buildings (constructed on or after 6/2/2015).	In hallways outside sleeping rooms. In sleeping rooms. On each level of the building and in basements. Ceiling or wall (not more than 12 inches below ceiling). On center of ceiling above stairways	Hard-wired (120 volt). Battery back-up also required.	Yes; must sound in all areas when activated.

Requirements for existing buildings

- Existing hotel guest rooms or lodging houses shall comply with Minnesota Statute 299F.362 Subd. 4. This requires a single-station smoke alarm in the guest room used for sleeping purposes.
- Existing residential buildings shall comply with MSFC Section 1103.8 and Table 1103.8.



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**TABLE 1103.8
SMOKE ALARM REQUIREMENTS**

CONDITION	LOCATION	POWER SUPPLY	INTERCONNECTION REQUIRED
Existing buildings that do not have any smoke alarms (same as new).	In hallways outside sleeping rooms. In sleeping rooms. On each level of the building and in basements. On ceiling or wall (less than 12 inches below ceiling). On center of ceiling above stairways.	If constructed on or after 8/1/1989, smoke alarms are required to be hard-wired (120 volt). If constructed before 8/1/1989, smoke alarms can be battery-powered.	No interconnection is required for battery-powered alarms.
Existing buildings (constructed on or after 8/1/1989).	In hallways outside sleeping rooms. On each level and in basements. On ceiling or wall (less than 12 inches below ceiling).	Smoke alarms are required to be hard-wired (120 volt).	No interconnection is required.
Existing buildings (constructed before 8/1/1989).	In hallways outside sleeping rooms. On each level and in basements. On ceiling or wall (less than 12 inches below ceiling).	Smoke alarms can be battery-powered.	No interconnection is required.
Replacement of smoke alarms in existing buildings.	Smoke alarms must be installed in same locations as originally installed.	Power supply must be the same as the smoke alarms being replaced.	Interconnection must be provided if the smoke alarms being replaced were interconnected.

Questions

Contact the Minnesota State Fire Marshal Division at 651-201-7221 or email the fire code team at firecode@state.mn.us.

